

**UNIVERSITI TEKNOLOGI MARA**

**PREDICTION OF BODY FAT  
STATUS BY USING NAÏVE BAYES  
TECHNIQUE AMONG UNIVERSITY  
STUDENTS**

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## **STUDENT DECLARATION**

I certify that this thesis and the project to which it refers is the product of my work and that any idea for quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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## ABSTRACT

Two types of lipid that can be related which are fat and fat-free mass. There are several methods to calculate body fat percentage like numerous formula equations, artificial neural network (ANN) technique and body fat callipers tool by using independent variables (IV) such as gender, age and BMI. All techniques have quite similar and applicable to use since the system is easy to use, require low budget and no surgery involved to predict body fat percentage. However, the performance of existing techniques was unclear due its results. Thus, this project presents a new system solver via prediction model to repeat the research with brand new approach which is Naïve Bayes (NB) in predicting body fat status. The inputs as IV that involves in NB are gender, age and BMI for the basic fat prediction and daily routines' frequencies for the new IV for the new fat prediction model. Throughout the 63 models of testing done, the results gave an average of 70% accuracy from 225 data learnt. Moreover, all the functionality testing results are successfully pass proving the system is well functioned. This research may get a chance to extend by changing the IV, increasing the amount of data set or using other AI techniques to get higher accuracy.

## **TABLE OF CONTENTS**

<b>CONTENT</b>	<b>PAGE</b>
<b>SUPERVISOR APPROVAL</b>	ii
<b>STUDENT DECLARATION</b>	iii
<b>ACKNOWLEDGEMENT</b>	iv
<b>ABSTRACT</b>	v
<b>TABLE OF CONTENTS</b>	vi
<b>LIST OF FIGURES</b>	x
<b>LIST OF TABLES</b>	xii
<b>LIST OF ABBREVIATIONS</b>	xiii

### **CHAPTER ONE: INTRODUCTION**

1.1	Background of Study	1
1.2	Problem Statement	2
1.3	Research Objectives	3
1.4	Research Scope	3
1.5	Research Significance	4
1.6	Conclusion	4

### **CHAPTER TWO: LITERATURE REVIEW**

2.1	Introduction	5
2.2	Body Fat	5
2.2.1	Obesity	7
2.3	Body Fat Percentage	8
2.3.1	Measurement of Body Fat Percentage	9

	2.3.1.1 Numerical Formulas	9
	2.3.1.2 Bioelectrical Impedance	10
	2.3.1.3 Body Mass Index	11
	2.3.1.2 Skinfold Method	12
2.4	Previous Research	13
2.5	Artificial Intelligent	16
2.5.1	Machine Learning	16
	2.5.1.1 Clustering	17
	2.5.1.2 Optimization	18
	2.5.1.3 Classification and Prediction	20
2.5.2	Technology of Artificial Intelligent	21
	2.5.2.1 Artificial Neural Network	21
	2.5.2.2 Multiple Linear Regression	22
	2.5.2.3 Support Vector Machine	23
	2.5.2.4 Naïve Bayes	25
2.5.3	Comparison between Machine Learning Algorithms	26
2.6	Conclusion	27

## **CHAPTER THREE: RESEARCH METHODOLOGY**

3.1	Introduction	28
3.2	Research Framework	28
3.3	Details of Project in Agile Method	30
3.3.1	Overview of Project Framework	30
3.3.2	Planning Stage	31
3.3.3	Analysis Stage	32
3.3.4	Design and Development Stage	35
3.3.5	Testing Stage	36
3.3.6	Documentation Stage	38
3.4	Software and Hardware Requirement	38
3.5	Conclusion	39